

Code 45: Industry Day 2022



25-26 October 2022

*USW Platforms & Payload Integration Department
Naval Undersea Warfare Center Division Newport, RI*

CODE 45 – EXPLOITING THE OCEAN INTERFACE FOR USW PLATFORM AND PAYLOAD SUPERIORITY

INTEGRITY



LOS ANGELES

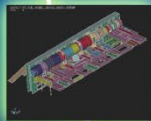
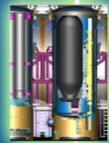
- In-Service Support
- Enhanced Mission Capability



SCIENCE & TECHNOLOGY

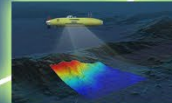
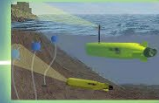
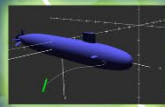


RAPID PROTOTYPING & EXPERIMENTATION



IN-SERVICE & FLEET OPERATIONAL SUPPORT

PERSISTENCE



FOREIGN MILITARY SALES



SURFACE SHIP USW

- In-Service Support
- Enhanced Mission Capability



VIRGINIA

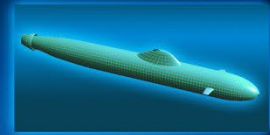
- Blocks III & IV (VPT)
- Block V (VPM)
- Offboard Vehicle Hosting
- Enhanced VPM Interfaces

REQUIREMENTS & CONCEPTUALIZATION

TECHNOLOGY DEVELOPMENT & DEMONSTRATIONS



RESULTS



NEXT GENERATION

- Integrated Unmanned Systems
- Large Hull & Ocean Interfaces
- Large Flexible Payload Volume
- Subsea & Seabed Warfare
- XLUUV Payload Integration



COLUMBIA

- Engineering Design Support
- Mission Capability



SSGN

- Continuous Experimentation
- Large Payload
- SOF/Joint Forces

USW Platforms & Payload Integration

Department - Code 45

Our Mission: Exercise full-spectrum programmatic and technical excellence in tactical missile, payload integration and unmanned undersea system solutions to deliver and sustain USW superiority

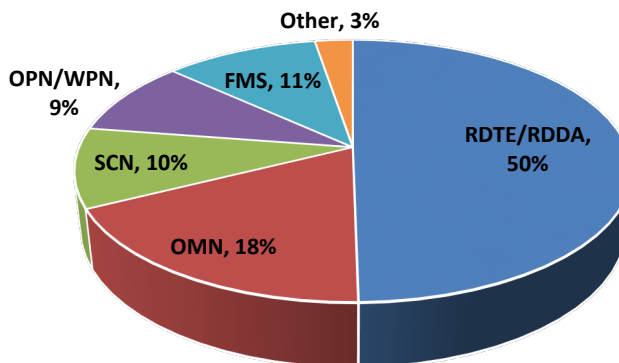
Warfare Center Technical Capabilities

- NP09 – USW Launcher Systems and Payload Integration
- NP10 – Submarine Tactical Missile Integration
- NP11 – USW Autonomous Vehicles
- NP20 – Subsea and Seabed Systems

Customers: COMSUBFOR, PEO SUB, PEO USC, PEO U&W, PEO COLUMBIA, PEO IWS, NAVSEA 05, NAVSEA 06, NAVSEA 07, USSOCOM, RDSA, DARPA, SCO, ONR, SSP, others...

Civilian Employees

- 84% Engineers and Scientists
- 36% Advanced Degrees
 - 6% PhDs
 - 30% Masters
- 18% Female, 82% Male
- Average Age – 40.2 yrs.



C45 Demand Increase Summary



NP09 - USW Launcher Systems and Payload Integration

- Growth across the customer base in support of multiple new TEMPALT efforts and increases in SSN(X) tasking, Virginia Payload Module analytical requirements and continued integration efforts of Undersea Dominance Payloads

NP10 – Submarine Tactical Missile Integration

- Strategic System Programs All Up Round simulator efforts leveraging Tomahawk MK112
- Foreign Military Sales efforts remain stable with planned growth due to AUKUS

NP11 - USW Autonomous Vehicles

- Growth across the customer base for payload and sensor development and integration, Large Vehicle Integration, Full Spectrum Undersea Warfare Innovative Naval Prototype and Joint Undersea Surveillance and Targeting support, Autonomy integration and Digital Engineering Efforts, along with increasing requirements associated with C45's UUV Software Support Agent Role

NP20 - Subsea and Seabed Systems

- Growth across the customer base for payload, sensor and platform development and integration

C45 Platform and Payload Integration Engineering and Technical Services



Summary of Contract Scope: C45 department wide task order for integrated logistics support, engineering services, flight test program support, project and financial management support, conceptual design and integration engineering services, technical, project management services for the development of new, and the modification of existing unmanned systems and platforms, missile and launcher systems.

Contracting Method: SeaPort

Anticipated Period of Performance: 5 year PoP

Acquisition Strategy: 100% Small Business Set Aside

Level of Effort: 867,000 hrs / \$85M with approximately 5% ODCs

Anticipated work location: 75% on-site / 25% contractor site

Contract Type: Cost Plus Fixed Fee (CPFF) and Cost Reimbursement (Cost Only) provisions for ODC's

C45 Platform and Payload Integration Engineering and Technical Services – cont'd



Unique Characteristics

- Key Personnel requirements:

- Integrated Logistics Support, Logistics Technical Data, Familiarization with Naval Supply Support Processes and Systems.
- Direct support to Fleet, Systems Engineering including experience with LabVIEW, Matlab, Computer Aided Design/Drafting, Microsoft applications.
- Unmanned Systems/Platforms data collection, processing/analysis, vehicle control and autonomy.
- Senior Level Geometrical Dimensioning and Tolerancing Certification.

- Facility requirements: TS-SCI Access. Secret Safeguarding.

Follow on ? Yes. SeaPort N00178-04-D-4083/N66604-19-F-3006 (ILS/ISEA/FTP) with McLaughlin Research Corporation which was solicited as a 100% Small Business Set Aside.

Does OCOI clause apply? Yes

Expected RFP release: FY23 QTR 01

C45 Autonomous Maritime Systems Test Center (AMSTC) Services



Summary of Contract Scope: C45 department wide services for the AMSTC Laboratory supporting existing legacy system UUVs, AUVs, Gliders and their associated programs and projects to include Computer Software Programming, Design, Development, and Maintenance; Engineering Design, Development, and Evaluation; Modeling and Simulation; At-Sea Test and Evaluation (T&E); Integrated Logistics Support (ILS) and Fleet Support; Cyber Security (CS) and Anti-Tamper (AT); AUV and UUV Operator Training and Qualification; Program Support and Administrative Services

Contracting Method: SeaPort

Anticipated Period of Performance: 5 year PoP

Acquisition Strategy: Unrestricted under SeaPort Zone 1, Northeast Region with TBD% Small Business sub-contracting goal. Sources Sought TBD.

Level of Effort: ~216,000 hrs / ~\$45M with approximately 30% ODCs

Anticipated work location: 90% on-site / 10% contractor site

Contract Type: CPFF CLINs for labor tasking and Cost Only CLINs for Other Direct Costs (ODCs) for incidental materials and travel.

C45 Autonomous Maritime Systems Test Center (AMSTC) Services – cont'd



Unique Characteristics

- **Key Personnel requirements:**
 - A group of key personnel may be requested covering designated areas of expertise; if requested, a resume will be necessary for each key person
- **Facility requirements:** TS-SCI Access. Secret Safeguarding.
- **Required Certifications/Designations:**
 - CMMI Level 3 or equivalent
 - Cyber Security / Anti-Tamper IAW DoDI 8500.01

Follow on ? Yes. N00178-04-D-4066/N6660418F3022 with Serco-IPS Corporation which was solicited as unrestricted.

Does OCOI clause apply? Yes

Expected RFP release: FY23 QTR 01

C45 Digital Launch Control and Display Panel (LCDP) Production

Summary of Contract Scope: Produce new Build-to-Print Internal Countermeasure Launcher (ICL) Digital Launch Control and Display Panels to support VIRGINIA Class Block V and COLUMBIA Class new construction.

Contracting Method: IDIQ

Anticipated Period of Performance: 5 year PoP; base with options.

Acquisition Strategy: TBD

Level of Effort: ~\$1.5M overall estimate.

Anticipated work location: 5% on-site (Gov Fitment/Functional Testing) / 95% contractor site

Contract Type: Firm Fixed Price (FFP)

C45 Digital Launch Control and Display Panel (LCDP) Production – cont'd



Unique Characteristics

- **Key Personnel requirements:**
 - Technical expertise in manufacturing and testing electronic panels in accordance with Government/Military Drawings and Standards.
- **Facility requirements:** Unclassified.

Follow on ? No, as this is a new digital design. Analog panels have been built under N66604-18-C-0464 with Epsilon Systems Solutions, Inc. which was solicited as unrestricted.

Does OCOI clause apply? Yes

Expected RFP release: FY23 QTR 01

C45 Surface Vessel Torpedo Tube (SVTT) Engineering and Technical Services



Summary of Contract Scope: Engineering analysis, design, and design review services; integrated logistics support; configuration management services; and engineering and technical documentation services in support of SVTT projects including upgrade and modernization of existing SVTT MK32 and advanced ASW Launchers as well as their associated handling and test equipment and that fall under the cognizance of the External Launcher Systems Branch.

Contracting Method: SeaPort

Anticipated Period of Performance: 5 year PoP

Acquisition Strategy: TBD

Level of Effort: ~211,000 hrs / ~\$30M with approximately 60% ODCs

Anticipated work location: 5% on-site / 95% contractor site

Contract Type: Cost Plus Fixed Fee (CPFF) and Cost Reimbursement (Cost Only) provisions for ODC's

C45 Surface Vessel Torpedo Tube (SVTT) Engineering and Technical Services – cont'd



Unique Characteristics

- **Key Personnel requirements:**
 - Occupational Safety and Health Agency (OSHA) certified and trained for the handling of hazardous materials and contractor crane operations.
 - Passive Countermeasure System (PCMS)-certified, in accordance with NAVSEA PCMS Repair/Installation Methods (RIM 05T1-99) manual.
- **Facility requirements:**
 - Industrial facility with available work space to modernize, repair and assemble up to six (6) Mk 32 Surface Vessel Torpedo Tubes (SVTTs).
 - TBD facility to test Torpedo Exit Velocity prior to shipment of SVTT launchers to the Government.
- **GFP requirements:**
 - There will be GFP associated with this effort; mainly launcher assemblies and components for use in modernization efforts.

Follow on ? Yes. SeaPort N00178-04-D-4083/N6660419F3003 with McLaughlin Research Corporation which was solicited as a unrestricted.

Does OCOI clause apply? Yes

Expected RFP release: FY23 QTR 02

C45 TEMPALT/TEMPMOD/COH Engineering and Technical Services



Summary of Contract Scope: C45 department wide contract for the design, development, engineering, assembly, fabrication, testing, documentation, software development, Cyber Security, training and technical services for these programs in the following areas:

- TEMPALT/TEMPMOD/Carry-On Hardware (COH) (TTC) Technical Data Package (TTC-TDP) Development & Approval
- TTC Systems Hardware/Software Design Fabrication, Test and Installation
- TTC Systems Demonstration, Maintenance and Repair
- TTC Systems Remove and Restore

Contracting Method: SeaPort

Anticipated Period of Performance: 5 year PoP

Acquisition Strategy: TBD

Level of Effort: ~250,000 hrs / ~\$33M with approximately 30% ODCs

Anticipated work location: ~10% on-site / ~90% contractor or installation (travel) site.

Contract Type: Cost Plus Fixed Fee (CPFF) and Cost Reimbursement (Cost Only) provisions for ODC's

C45 TEMPALT/TEMPMOD/COH

Engineering and Technical Services – cont'd



Unique Characteristics

- **Key Personnel requirements:**
 - Senior Technical Representative to cover/oversee all SOW tasks.
 - Senior Engineer for Design to cover ship check and data package development through final approval; includes research and getting documents through NAVSEA approval board.
 - Senior Engineer for Installation to cover procurement and fabrication of all materials, cabling, etc.; oversees physical install and departure from specification approval and removal.
 - Senior Computer Engineer to cover all software design, documentation, test and evaluation, obtaining Authority to Test and Authority to Operate.
- **Facility requirements:** TS-SCI Access. Secret Safeguarding.
- **Required Certifications/Designations:**
 - CMMI Level 3 or equivalent

Follow on ? Yes. SeaPort N00178-04-D-4010/N6660419F3011 with American Systems Corporation which was solicited as a 100% Small Business Set Aside.

Does OCOI clause apply? Yes

Expected RFP release: FY24 QTR 01